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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/603,838	10/16/2000	Slavik Kasztelan	PET-1866	3445

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Millen White Zelano & Branigan PC  
2200 Clarendon Boulevard Suite 1400  
Arlington Couthouse Plaza 1  
Arlington, VA 22201

EXAMINER
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ILDEBRANDO, CHRISTINA A

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 03/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/603,838

Examiner

Christina Ildebrando

Applicant(s)

KASZTELAN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2000.
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) 14-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-12, drawn to a catalyst composition, classified in class 502, subclass 64.
  - II. Claims 14-18, drawn to a hydrocarbon conversion process, classified in class 208, subclass 106+.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of use, such as a catalyst for the reduction of nitrogen oxides.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Brian Heaney on February 20, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-12. Affirmation of this election must be made by applicant in replying to this

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Office action. Claims 14-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 9 recites the limitation "above 0 to at most 20%...of at least one promoter element." It is the position of the examiner that the specification as originally filed does not provide sufficient support the endpoint "above 0." The specification as original filed contains support for a range of "at most 20%," "0.1-20%," and "0-10%." See page 4. Original claim 9 recites "at most 20%." Therefore, there is insufficient support for the specific range claimed.

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If applicant believes that the specification does provide support for the recitation considered by the examiner to constitute new matter, applicant is requested to point to the page and line number where such support can be found.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 1 recites "at least one element that is located at the matrix." This limitation is confusing because it is not clear what applicant intends by "at the matrix." It is not clear whether applicant intends the element to be on the matrix or in the matrix, rather than at the matrix.

11. Claim 1 recites groups of compounds in improper Markush format. This limitation renders the claim indefinite because it is improper to use the term "selected from" instead of "selected from the group consisting of." Refer to MPEP 2173.05(h).

12. Claim 9 recites the limitation "the final catalyst" in line 2. There is insufficient antecedent basis for this limitation in the claims.

13. Claim 10 recites the limitation "after an impregnation." It is not clear to what impregnation applicant is referring. It is not clear if applicant intends the impregnation of step (c).

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14. Claim 10 recites the limitation "hydro-hydrogenating element" throughout. It is believed that applicant intends "hydro-dehydrogenating element," to provide consistent antecedent basis throughout the claims. Refer to the terminology of claim 1.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1, 5-7, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollitzer in view of Jan et al.

Pollitzer et al. (US 3,730,878) discloses a zeolite catalyst composition useful in hydrotreating processes, including hydrocracking processes. Pollitzer et al. teaches that the catalyst contains a porous amorphous carrier such as alumina or a silica alumina composite containing a group VI metal component and a faujasite zeolite carrier material containing a group VIII metal component (column 3, lines 40-50). It is taught that the group VIII and group VI metal components are separately combined with their respective carriers and are then mixed together (column 4, lines 55-60). Suitable group VI metals include molybdenum, chromium, and tungsten and suitable group VIII metals include iron, cobalt, and nickel (column 3, lines 50-55). The catalyst contains from 4-30% by weight of the group VI metal and from 1-10% by weight of the group VIII metal (column 3, lines 60-70). Regarding claim 12, it is the position of the examiner that, given

the process conditions described by the reference, at least some of the metallic radicals would be in sulfide form.

The process limitations in claims 10-11 are noted. However, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

Pollitzer does not teach that the catalyst composition contains at least one promoter element selected from the group consisting of phosphorus, boron, and silicon.

Jan et al. (US 5,393,409) discloses a catalyst composition useful in catalytic cracking processes. Jan et al. teaches that the catalyst composition comprises a bound faujasite zeolite component (column 1, lines 64-69) in combination with hydrogenation components such as group VIB and Group VIII metals (column 7, lines 40-45, 65-69 and column 8, lines 5-10). The composition may further comprise a promoter element such as phosphorus or boron (column 8, lines 24-29).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention of Pollitzer in light of the teachings of Jan et al. Jan et al. teaches that additional catalyst ingredients, such as promoter elements are known in the art and are useful when combined with a bound faujasite zeolite. Because both catalysts can be used in the same or similar processes of use, one would have reasonable expectation of success from the combination.

With regards to claim 7 that requires the presence of both boron and silicon, it is noted by the examiner that the Pollitzer reference teaches that silica can be added to the alumina matrix in an amount of 10-90% by weight. Refer to column 4, lines 5-10. It is the position of the examiner that this added silica would meet the limitation of promoter, given the ranges and quantities instantly claimed.

17. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollitzer in view of Jan et al. as applied to claims 1, 5-7, and 9-12 above, and further in view of Koepke et al.

Pollitzer in view of Jan et al. is applied as above for claims 1, 5-7, and 9-12.

The modified disclosure of Pollitzer does not specifically teach the use of a Y zeolite or a dealuminated zeolite.

Koepke et al. (US 4,777,157) teaches that for hydrocracking processes, the use of a Y zeolite in dealuminated form is preferred (column 2, line 60- column 3, line 10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have further modified the disclosure of Pollitzer to include the use of zeolite Y or a dealuminated zeolite Y in light of the teachings of Koepke et al. Pollitzer teaches the use of faujasite zeolites, which includes zeolite Y. One would have been motivated by the teachings of Koepke et al. to specifically choose zeolite Y in light of the disclosure that in hydrocracking operations, the use of zeolite Y is conventional and preferred.



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18. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pollitzer in view of Jan et al. as applied to claims 1, 5-7, and 9-12 above, and further in view of Shi et al.

Pollitzer in view of Jan et al. is applied as above for claims 1, 5-7, and 9-12 above.

The modified disclosure of Pollitzer further does not teach that the catalyst composition contains elements of group VIIA.

Shi et al. (US 5,972,832) discloses a catalyst composition useful in hydrocracking processes. Shi et al. teaches that the catalyst composition comprises fluorine, nickel and tungsten oxides, alumina, and a zeolite such as Y zeolite (column 2, lines 20-25 and column 4, lines 5-6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have further modified the invention of Pollitzer in light of the teachings of Shi et al. Shi et al. teaches that additional catalyst ingredients, such as fluorine, are known in the art and are useful when combined with a faujasite zeolite such as zeolite Y. Because both catalysts can be used in the same or similar processes of use, one would have reasonable expectation of success from the combination.

### ***Double Patenting***

19. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

20. Claims 1-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 and 22 of copending Application No. 09/603,837. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Copending application No. 09/603,837 discloses and claims a catalyst comprising at least one matrix, at least one zeolite, at least one element that is located at the matrix and selected from the group consisting of groups VIB, VIII, and VB, at least one promoter element, wherein the zeolite contains at least one element of group VB in its porous network (claim 1). The zeolite also contains at least one element of group VI and/or group VIII in its porous network (claim 4).

The difference between the instant claims and the claims of '837 is that the instant claims do not require the presence of a group VB element. However, one of ordinary skill would recognize that the instant claims do not exclude the presence of additional elements, even in major proportions.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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**Conclusion**

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Ildebrando whose telephone number is (703) 305-0469. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

CAI  
February 28, 2002